

L 11215-67

ACC NR: AR6016947

D

namic influence of mountain systems at the ridge level is insignificant: the warm-up in the descending currents and the cooling in the ascending currents mutually compensate on the average. Over 7 km, the predominance of ascending currents leads to a cooler temp. over mountains relative to the plains. In October, the atmosphere over mountains is warmer than over the plains, but the warm layer is thinner than in the summer. In April the atmosphere over mountains is in general warmer than over the plains. The local influence of mountains on the temperature field depends significantly upon the form of the surrounding relief. [Translation of abstract].

SUB CODE: 04,08

Card 2/2 Jb

ACC NR: AM7000172

Monograph

UR/

Chanysheva, Svetlana Georgiyevna

Local winds of Central Asia (Mestnye vetry Sredney Azii) Leningrad. Gidrometeorizdat, 1966. 119 p. illus., bibliog., tables. (At head of title: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR. Sredneaziatskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut) 820 copies printed.

TOPIC TAGS: micrometeorology, microclimatology, atmospheric physics, mountain valley circulation, atmospheric turbulence, local wind, foehn wind, ursat'yev wind, valley wind, mountain wind, garmsil' wind, wind gap

PURPOSE AND COVERAGE: This monograph is of interest to a wide circle of scientists, including meteorologists, climatologists, air-pollution specialists, atmospheric physicists, and aviation personnel. It discusses several types of mountain-valley and foothill terrains which favor the development of mountain-valley circulation and distinctive local winds in Central Asia (generally limited to the Tadzhik, Kirgiz and Uzbek Republics, mainly in the Tien-Shan and Pamir-Alay Mountain systems). The data used in the study were obtained at 38 stations (expeditionary and regular) by such organizations as the Hydrometeorological Service of the Uzbek SSR, the Central Asian Scientific Research Hydro-meteorological Institute, the Tashkent State University, and the Academy of Sciences of the Uzbek SSR. Local conditions analyzed to determine the

Card 1/4

UDC: 551.553+551.555

ACC NR: AM7000172

interrelationship of terrain and meteorological conditions favoring the development of mountain-valley circulation and local winds include: the depth, direction, and configuration of the valleys, the relief and orientation of the foothills and surrounding mountain ranges and passes; general synoptic situations and elements and their changes with the seasons and time of day, and regional and anomalous air circulation. Major local winds described in detail include the foehns and foehn-type winds of Uzbekistan, the "ursat'yev" winds ("kokandets") of the Fergana Valley, the "dzhizak" winds, the "boam" and "santash" winds of Lake Issyk-Kul', and the "garmail'" winds of Turkmenia. The 186-title bibliography includes references to the work of both Soviet and non-Soviet investigators.

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ACC NR: AM7000172

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ACC NR: AM7000172

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SUB CODE: 04/ SUBM DATE: 11Jul66/ ORIG REF: 131/ OTH REF: 053/

Card 4/4

LOBANOV, Ye. M.; CHANYSHEV, A.I.; CHANYSHEVA, T.I.

Use of activation analysis in determining the scandium content in rocks. Izv. AN Uz.SSR. Ser.fiz.-mat.nauk 9 no.3:66-68 '65.

Quantitative determination of fluorine in fluorite ores and their derivatives by the activation method using a polonium-beryllium neutron source. Ibid.: 68-69.

(MIRA 19:1)

1. Institut yadernoy fiziki AN UzSSR. Submitted February 17, 1964

Country	:	USSR	Q
CATEGORY	:	Farm Animals. Sheep	
ABS. JOUR.	:	RZBiol., No. 13, 1958, No. 59538	
AUTHOR	:	Trofimov, P. V.; Chapa, G. N.	
INST.	:	Stalingrad State Agricultural Experiment*	
TITLE	:	The Increase of Wool Production in Hybrids by Way of Alternative Crossing	
ORIG. PUB.	:	Byul. nauchn. inform. Stalingr. gos. s.-kh. opytn. st., 1956, No 1, 45-47	
ABSTRACT	:	Under conditions of the Stalingradskaya and Saratovskaya Oblasts, the crossing of Pre- coce-Fat-Rumped hybrids with rams of Cauca- sian and Groznyy breeds produced three-breed hybrids. The Caucasian-Precoce-Coarse Wool dams yielded 4.26 kg. of wool, Groznyy-Pre- coce-Coarse Wool ones 4.02 kg. each and Pre- coce-Coarse Wool ones 2.63 kg. each.	
<p>* Station</p>			
CARD:	1/1		

CHAPALA, I.D.; OVCHENKOV, N.M.; KUDRYAVTSEV, A.M.

Removal of hydrogen from helium. Gas.prom. 5 no.6:48-50
Je '60. (MIRA 13:6)
(Helium) (Hydrogen)

ACCESSION NR: AT4028539

S/0000/63/000/000/0060/0063

AUTHOR: Chapala, I. D.

TITLE: Identifying small amounts of hydrocarbons in inert gases

SOURCE: AN UzSSR. Otdelniye khimicheskikh nauk. Nekotorye voprosy* khimicheskoy tekhnologii i fiziko-khimicheskogo analiza neorganicheskikh sistem (some problems in the chemical technology and physico-chemical analysis of inorganic systems). Tashkent, Izd-vo AN UzSSR, 1963, 60-63

TOPIC TAGS: hydrocarbon, inert gas, helium, argon, nitrogen, hydrogen, oxygen

ABSTRACT: A high degree of purity in inert gases, such as helium and argon, is required. Nitrogen and hydrogen can be established with an adequate degree of precision by spectral analysis although identifying small amounts of hydrocarbons in the same medium is a difficult task. The problem was solved through direct identification of hydrocarbons by igniting them over an incandescent platinum helix. A schematic of the instrument is presented in Fig. 1. This method may be recommended for identifying the hydrocarbons in standard calibrating mixtures, in the processing of spectral methods of analysis, and in chromatography. Orig. art. has: 1 figure

Card 1/10

ACCESSION NR: AT4028539

ASSOCIATION: Otdeleniye khimicheskikh nauk, AN UzSSR (Department of Chemistry,
AN UzSSR)

SUBMITTED: 00

DATE ACQ: 16Apr64

ENCL: 01

SUB CODE: SD, CH

NO REF SOV: 001

OTHER: 000

Card 2/2

CHAPALA, I.D.; STOYANOWSKAYA, L.I.

Characteristics of condensates of Central Asia. Gaz. delo no.10:3-6
'65. (MIRA 18:12)

1. Sredneaziatskiy filial Vsesoyuznogo nauchno-issledovatel'skogo
instituta prirodnogo gaza. Submitted January 29, 1965.

L 23905-65 EWT(1)/EWA(h) Feb

ACCESSION NR: AP5002047

S/0142/64/007/005/0639/0640

AUTHOR: Chapala, V. A.

B

TITLE: Transistorized nanosecond-pulse shaper ²⁵

SOURCE: IVUZ. Radiotekhnika, v. 7, no. 5, 1964, 639-640

TOPIC TAGS: pulse shaper, nanosecond pulse

ABSTRACT: A cascade circuit of three differentiating transistors (see Fig.1 of Enclosure) is proposed for producing well-shaped short pulses. P416 transistors and D18 diodes are used. With a square 8-v input pulse (450 kc, 5 μ sec duration), the 5-v output pulse (with 75-ohm load) had a duration of 20 nsec and a rise time of 3 nsec. Orig. art. has: 3 figures and 3 formulas. [03]

ASSOCIATION: none

SUBMITTED: 14Mar64

ENCL: 01

SUB CODE: EC

NO REF SOV: 000

OTHER: 000

ATD PRESS: 3177

Card 1/2

L 23905-65

ACCESSION NR: AP5002047

ENCLOSURE: 01

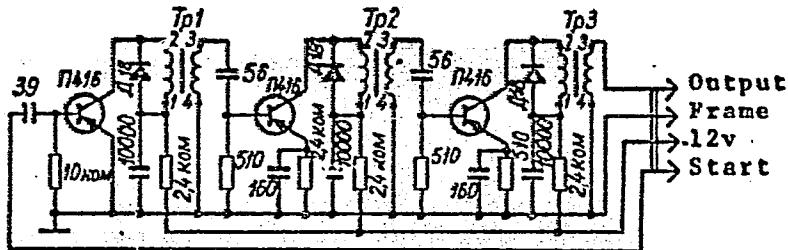


Fig. 1. Nanosecond-pulse shaper

Card 2/2

CHAPALYUK, A. P., ANTOHOV-ROMANOVSLIY, V.V., STEPANOV, B. I., and FOK, M. V.

"The Output of the Luminescence of a System with Three Energy Levels," Dokl.
AN SSSR, 105, No 1, pp 50-53, 1955.

Translation D 419421, page 13

CHAPANOV, KH.

Equalization of second-degree curves of two variables. p. 33.

REKHNIKA. Vol. 4, no. 5, June/July 1955

Sofia, Bulgaria

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 6, No. 1, January 1957

CHAPANOV, KH.

CHAPANOV, KH. The multigroup-equalization method by means of successive approximations.
p. 34.

Vol. 5, No. 5, Sept./Oct. 1956

TEKHNIKA.

TECHNOLOGY

Sofia, Bulgaria

Sc: East European Accession, Vol. 6, No. 3, March 1957

STANCHEV, K.; CHAPANOV, Ts.

Vertical gradient of temperature in the lower layers of the atmosphere
during the warm months of the year. Khidro i meteorolog no.4:15-27
'61.

STANCHEV, K.; CHAPANOV, Ts.

Some characteristics of the upper winds over Bulgaria.
Khidro i meteorolog no.4:33-40 '62.

1. Chlen Redaktsionnata kolegiia, "Khidrologija i meteorologija".

CHAPANOV, TS.

Humidity over Sofia. Khidro i meteorolog 13 no. 1:19-24 '64.

L 23917-66 EWT(1)/T JK
ACC NR: AP6014945

SOURCE CODE: UR/0217/65/010/005/0826/0831

AUTHOR: D'yakonova, T. L.; Veprintsev, B. N.; Chapas, A. F.; Brodskiy, V. Ya.

34

B

ORG: Institute of Biological Physics, AN SSSR, Moscow (Institut biologicheskoy fiziki AN SSSR)

TITLE: Induction of RNA synthesis in a nerve cell with electrical activity

SOURCE: Biofizika, v. 10, no. 5, 1965, 826-831

TOPIC TAGS: RNA, biosynthesis, electrophysiology

ABSTRACT: RNA synthesis was induced with electrical activity in earthworm nerve cells in order to attempt to explain the character of the connection between RNA synthesis in the cell and the generation of its effect potential. RNA synthesis was induced both in the whole animal and in the abdominal network isolated in weak Ringer's solution. RNA synthesis appears to depend on the number of nerve impulses generated by the cell rather than on the speed of the chemical reactions taking place, since RNA synthesis with electrical activity is affected little by a change in temperature (from +19 to +4°C). Orig. art. has: 3 figures and 4 tables. [JPRS]

SUB CODE: 06 / SUBM DATE: 19Jun64 ! ORIG REF: 010 / OTH REF: 008

UDC: 577.37

Card 1/1 BK

Z

MARKYAVICHUS, A. [Markevicius, A.]; CHAPAS, B. [Capas, B.]

Leptospirosis in animals in the Lithuanian S. S. R. Veterinariia 42
no.10:32-34 0 '65. (MIRA 18:10)

1. Starshiy veterinarnyy vrach Litovskoy respublikanskoy
veterinarnoy laboratorii (for Markyavichus). 2. Starshiy veteri-
narnyy vrach Klaypedskoy veterinarnoy laboratorii (for Chapas).

D'YAKONOVA, T.L.; VEPRINTSEV, B.N.; CHAPAS, A.F.; BRODSKIY, V.Ya.

Induction of RNA synthesis in the nerve cell by the electric
activity. Biofizika 10 no.5 826-831 '65.

(MIRA 18:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

CHAPAYEV, A.A.

SKOTNIKOV, Viktor Vasil'yevich; VEDENYAPIN, G.A., red.; LIPGART, A.A., otv. red.;
BORISOV, S.G., red.; BRISKIN, M.I., red.; DYBOW, O.V., red.; ZIL'BERG, Ya.
G., red.; KOZLOVSKIY, I.S., red.; LOZAR', A.S., red.; LUNEV, I.S., red.;
PEVZNER, Ya.M., red.; PRYADILOV, V.I., red.; RAMAYYA, K.S., red.;
SAMOL', G.I., red.; SEDOVA, Ye.V., red.; KHANIN, N.S., red.; CHAPAYEV,
A.A., red.; CHISTOZVONOV, S.B., red.; SHKOL'NIKOV, E.M., red.;
YEGORINA, L.I., red.izd-va; SMIRNOVA, G.V., tekhn.red.

[Intermediate transformation and temper brittleness of automobile body steels] Promezhutochnoe prevrashchenie i otpusknaya
khrupkost' v konstruktionnykh avtomobil'nykh staliakh. Moskva,
Gos.nauchno-tekhn. izd-vo mashinostroitel. lit-ry 1958. 74 p.
(Gosudarstvennyi nauchno-issledovatel'skii avtomobil'nyi i avtomotornyi institut Trudy, no.85) (MIRA 12:2)
(Steel, Automobile--Metallography)

CHAPAYEV, A.M., general-major aviatsii

Inculcating military traditions in flying personnel. Mor.sbor. 44
no.2;20-26 F '61. (MIRA 14:4)
(Russia--Air force)

CHAPAYEV, N. P.

Engineer, "An Attachment for Shaving Barrel Shaped Teeth," Stanki i Instrument, 10,
No 1, 1939.

U-1505, 4 Oct 1951.

CHAPAYEV, N. P., Engineer

Stankinprom (-1946-)

"An Unfastening Mandrel for Lathe Work" Stanki I Instrument, 17, Nos. 4-5, 1946

CHARAIEV, N. P.

PA 75143

USSR/Engineering
Tools, Machine
Machines, Grinding

Jan 1918

"Grinding the Gaps in Cylindrical Gears," N. P.
Chapayev, Engr, Stank In Prom, 4 $\frac{1}{2}$ pp

"Stanki i Instrument" No 1

Quality of gears depends upon their grinding after
heat treatment. Briefly presents some of factors
which permit obtaining of high-quality gears.

IC

75143

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0

V
CHAFAEV, N. P.

The production and finishing of gear wheels. Moscow, Gos. nauchno-tekhn. izd-ye
maschinostroit. lit-ry, 1949. 199 p. (60-27550)

TJ184.048

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0"

CHAPAEV, N. P.

Izgotovlenie i otdelka zubchatykh koles; spravochnoe rukovodstvo. Moskva,
Mashgiz, 1949. 199 p. illus.

(Manufacturing and finishing gear wheels; reference book.)

DLC: TJ184.C48

SO: Manufacturing and Mechanical Engineering in the Soviet Union,
Library of Congress, 1953

1. CHAPAEV, N. P.

2. USSR (600)

7. Grinding of Holes of Cylindrical Gear Wheels, Machine Tools and Instruments
No. 9, Sep 1950

9. Compilation of Information of the USSR Machine and Machine Tools Industry
Contained in Soviet Publications. [REDACTED]

CHAPAYEVA, K.

Our life is happy now. Rab.i sial. 36 no.2:2 p '60.
(MIRA 13:6)

(Chapaev, Vasili Ivanovich, 1887-1919)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0

CHAPCHAY, V. (Odessa)

Fire at the Odessa petroleum tank farm. Pozh. delo 8 no.9:
26-27 S '62. (MIRA 16:11)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0"

CHAPCHAYEV, A. A.

CHAPCHAYEV, A. A. -- "INVESTIGATION OF GAS LEAKAGE BY PISTON RINGS AND ITS EFFECT ON
ENGINE OPERATION." SUB 14 JUN 52, SCI COUNCIL OF STATE SCI RES AUTOMOBILE AND
AUTOMOTIVE INST (NAMI) (DISSERTATION FOR THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCE)

SO: VECHERNAYA MOSKVA, JANUARY-DECEMBER 1952

CHAPCHAYEV, H.H.

USSR/Engineering - Fuel pumps

Card 1/1 : Pub. 12 - 3/14

Authors : Chapchayev, A. A.; Usanov, A. D.; and Minyaylov, V. F.

Title : Standardizing fuel pumps for automobile engines

Periodicals : Avt. trakt. prom. 5, 9-12, May 1954

Abstract : The editorial gives some information concerning tests, conducted by the Scientific Automotive Institute, on standardizing fuel pumps for the GAZ-51, ZIM, GAZ M-50, ZIS-120, and ZIS-5M automobile engines. Illustrations and diagrams depicting the testing of fuel pumps, are presented. Graph; drawings.

Institution :

Submitted :

AUTHOR: Usanov, A.D., Chapchayev, A.A. 113-58-7-11/25

TITLE: The Effect of the Operating Conditions of the Engine on the Operation of the Spark Plugs (Vliyaniye rezhimov ekspluatatsii dvigatelya na rabotu svechey zazhiganiya)

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 7, pp 22-25 (USSR)

ABSTRACT: Research conducted by Academician Kulebakin of the TsKB mototsiklostroyeniya (TsKB of Motorcycle-Building), the LPI imeni Kalinina (LPI imeni Kalinin) and the NIIAvtopriborov, has cast light on several technical problems connected with the increase of the reliability and evaluation of the thermal properties of spark plugs. Investigations were made with the aid of one-cylinder sections and the many-cylinder engines of serial production, such as GAZ M-20, GAZ-51, ZIL-120 and MZMA-401. Thus the characteristics of an AllU plug with a heat chamber of 0.61 cubic cm content changes sharply depending on the spot they are inserted, while the temperatures of a plug of the same type but with a heat chamber content of 0.21 cubic cm almost never change, no matter where the plug is inserted. Consequently, changes of the heat chamber content should be utilized in the standardization of spark plugs and creation of a rational thermal range. The AllU plug, with its heat chamber content of

Card 1/2

113-58-7-11/25

The Effect of the Operating Conditions of the Engine on the Operation of the Spark Plugs

0.61 cubic cm, is close to the Al6U plug, of 0.53 cubic cm, with respect to thermal characteristics. It was found that the existing plug type most suitable for the thermal tension conditions of the engines is a 14-mm spark plug with a threadless fastening of the shaft of the central electrode to the uralite insulator, and with the core fastened to the spark body by an airtight powder sealing.

There are 2 photos, 3 graphs, and 3 diagrams.

ASSOCIATION: * NAMI (NAMI)

1. Spark plugs--Performance 2. Spark plugs--Thermal properties

Card 2/2 * GOSUDARSTVENNY SOYUZNYY ORDENA TRUDOVOGO KRASNOGO ZNAHEN'
NAUCHNO - ISSEGOVATEL'SKIY AVTOmobil'NYY i AVTOMOTORNYY INSTITUT.

PETRUSHOV, V.A., inzh.; PASHIN, M.A., red.; LIPGART, A.A., otd.red.;
AL'PEROVICH, A.G., red.; BORISOV, S.G., red.; BRISKIN, M.I., red.;
DYBOV, O.V., red.; ZIL'BERBERG, Ya.G., red.; LOZAR', A.S., red;
IUMEV, I.S., red.; MAGAYEV, P.V., red.; PEVZNER, Ya.M., red.;
PRYADILOV, V.I., red.; RAMAYYA, K.S., red.; SAMOL', G.I., red.;
SEDOVA, Ye.V., red.; TAMEUCHI, O.V., red.; KHANIM, N.S., red.;
CHAPCHAYEV, A.A., red.; CHISTOZVONOV, S.B., red.; SHKOL'NIKOV,
E.M., red.; YEGORKINA, L.I., red.izd-va; GORDEYEVA, L.P., tekhn.
red.

[Operational analysis of the multiplate friction transformer]

Analiz raboty mnogodiskovykh friktsionnykh transformatorov.
Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry,
1960. 79 p.(Moscow. Gosudarstvennyi nauchno-issledovatel'skii
avtomobil'nyi i avtomotornyi institut [Trudy], no.90).

(MIRA 13:8)

(Motor vehicles--Transmission devices)

S/113/60/000/010/001/014
D270/D501

AUTHORS: Chapchayev, A.A., Candidate of Technical Sciences,
Karpov, K.V., and Maskenskov, K.M.

TITLE: Gasoline injection in the GAZ-12 engine

PERIODICAL: Avtomobil'naya promyshlennost', no. 10, 1960, 4 - 7

TEXT: On the basis of a standard carburettor from the FA3-12 (GAZ-12) engine, NAMI endeavored to produce a prototype engine with direct gasoline injection. Its purpose was to obtain maximum power and economy. The feed system of the experimental engine was formed by a high pressure 6-plunger gasoline pump with its supply piston pump and vacuum regulator, nozzle, valve tube and fuel filter. Two variants of cylinder heads were designed. The location of the nozzle over the exhaust valve is important with regard to cooling the hot zone, improved evaporation of fuel and favorable conditions for mixing. Automatic regulation of the mixture was accomplished with a diaphragm type vacuum regulator, connected to the choke tube. A detailed description and account of their operation are given. The

Card 1/3

Gasoline injection in the ...

S/113/60/000/010/001/014
D270/D301

system is provided with sufficient regulation and with the necessary means for correcting the mixture in relation to the operating conditions. The experiments began with the investigation of the experimental cylinder head, a compression ratio of 6.7 and the nozzle in the axis. The engine worked best at an injection angle of 65°, when the engine developed 61 hp at 2,000 rpm with a consumption of 240 g/hp.hour. The engine worked abnormally with injection during the compression cycle. When angles are larger than 90°, too short duration produces bad mixing; this variant of injection results in higher power but lower fuel economy. The engine with a standard heat, 6.2 compression and nozzle over the cylinder (injection angle 65°) worked steadily with markedly enriched mixtures. The engine worked much better with the nozzle located above the exhaust valve. Experiments demonstrated that the most suitable moment of injection is to start it during suction at 25° after top dead center. Increase of this angle leads to over-rich regulation. This confirms the findings of various investigations that optimum injection is in the first half of the suction cycle. The needle nozzle proved to be the best type, particularly from point of view of fuel economy, because

Card 2/3

Gasoline injection in the ...

S/113/60/000/010/001/014
D270/D301

It gives better mixing. The experimental chamber is superior in economy, whereas the standard chamber provides more power; the former ensures a better mixture, but the latter is superior from a thermodynamical point of view due to the lower surface area/volume ratio. As far as the composition of mixture is concerned, the optimum requirements of the GAZ-12 engine with direct injection are related to operational conditions, as in the carburetor engine. The "average" setting ensures a regulation that is less rich than the optimum in the range of 1000-1500 rpm, richer for 2500-3000 rpm and practically optimum in the range 1500-2500 rpm. Optimum regulation for the whole range of speed and load conditions can be obtained only with special tuning and by relating the characteristic of pump fuel feed to the requirements of the engine, corresponding adaptation of the inlet system, etc. Direct injection of the GAZ-12 engine without basic modifications gave an increase in engine power and torque while maintaining fuel economy. There are 5 figures and 1 table.

↙

ASSOCIATION: NAMI

Card 3/3

CHAPCHAYEV, A.A., kand.tekhn.nauk; ISAVNIN, G.S.

Testing feeding systems with continuous gasoline injection into
the inlet pipe. Avt.prom. no.3:28-30 Mr '61. (MIRA 14:3)

1. Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni
nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.
(Automobiles—Fuel systems)

CHAPCHAYEV, A.A., kand.tekhn.nauk; ISAVNIN, G.S.; MASKENSKOV, K.M.

Gasoline-injection engine. Avt.prom. 28 no.5:8-9 My '62.
(MIRA 15:5)

1. Gosudarstvennyy soyuznnyy ordena Trudovogo Krasnogo Znameni
nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut
i Gor'kovskiy avtozavod.

(Automobiles—Engines)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0

CHAPCHAYEV, A., kand. tekhn. nauk; NAUMOV, S., inzh.; ZORIN, A., inzh.;
POLETAYEV, R.

Helical steel piston rings. Avt. transp. 43 no.4:30-33 Ap '65.
(MIRA 18:5)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0"

VERBITSKIY, V.D.; CHAPCHIKOV, N.S.

New semiautomatic table-type 348 sand slinger designed by the
Scientific Research Institute for the Tractor and Motor Vehicle
Industry. Lit. proizv. no.11:18-21 N '61. (MIRA 14:10)
(Coremaking--Equipment and supplies)

CHARCHIKOV, M.S.

The 348 semiautomatic bench sandblasting machine. Avt. prom.
29 no.8:46 Ag '63. (MIRA 16:11)

1. Nauchno-issledovatel'skiy institut avtomobil'noy
promyshlennosti.

CHAPCHIKOV, N.S.; BLOSHTEYN, Ye.A.

Automation of the production of foundry cores. Lit. proizv.
no.4:11-14 Ap '64. (MIRA 18:7)

GRYUNDLAND, I. (Varshava); CHAPCHINSKA, B. [Czapczynska, B.] (Varshava)

Structure of matter and the sense of smell. Priroda 54 no. 1:
41-45 Ap '65. (NIKA 18:5)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0

CHAPCHINSKAYA, O.M.

CHAPCHINSKAJA, O.M.

"Sur la question de la structure de l'acide abietique". Arbouzow, B.A. et
Chapchinskaja, O.M. (p. 404)

SO: Journal of General Chemistry. (Zhurnal Osnovnoi Khimii) 1936, Vol. 6, No. 3.

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0"

CHAPKIN, A., kandidat meditsinskikh nauk.

Causes of indistinct orders from the dispatcher. Grasho.av. 13
no.9:30-31 8 '56. (MLRA 9:11)
(Airports---Traffic control)

KUCHAYEVA, A.G.; CHAPEK, A.

Capacity of Actinomyces to transform steroid molecules as their
differentiation sign. Mikrobiologija 32 no.6:995-999 N-D '63
(MIRA 18:1)

1. Institut mikrobiologii AN SSSR.

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0

CHAFEK, A., kand. med. nauk; YEROKHIN, V., mladshiy nauchnyy sotrudnik

The pilot in an emergency situation. Grazhd. av. 22 no. 2; 19-21
F '65. (MIRA 18:5)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0"

CHAPEK, A.V.

USSR/Medicine - Neurophysiology, apparatus

FD-2384

Card 1/1 Pub. 154-15/18

Author : Chapek, A. V. (Moscow)

Title : Portable apparatus for measuring motor conditioned responses in man.

Periodical : Zhur. vys. nerv. deyat., 5, 124-127, Jan/Feb 1955

Abstract : A new portable apparatus has been invented which can be used for recording motor conditioned responses in man. This apparatus functions faultlessly both under normal conditions and under conditions of low barometric pressure. Because of its small size and weight this apparatus can be easily transported and installed. Four diagrams.

Institution: --

Submitted : November 17, 1954

CHAPK, A.V., kandidat meditsinskikh nauk, (Moskva)

Portable rotating chair for examination of the vestibular analyser.
Vest.oto-riia 17 no.3:69-70 My-Je '55. (MLRA 8:9)

(VESTIBULAR APPARATUS, function test
analyser exm.,portable rotating chair)

CHAPEK, A. V.

USSR/Human and Animal Physiology - Nervous System.

R-12

Abs Jour : Referat Zhur - Biologiya, № 16, 1957, 71198

Author : Chapek, A.V.

Inst :

Title : Training Test of Aviators in Evaluation of Short Time Intervals.

Orig Pub : Voen-med. Zh., 1956, № 12, 44-46

Abstract : No abstract.

Card 1/1

- 146 -

GMLLER, I.M.,kandidat meditsinskikh nauk.; CHAPMK, A.V.,kandidat
meditsinskikh nauk.

A portable device for studying human sleep by means of actography.
Gig. i san. 21 no.2:60-61 P '56. (MLRA 9:6)

1. Iz Nauchno-issledovatel'skogo instituta Gражданского
vosdushnogo flota.

(SLEEP, physiol.

portable device for studying human sleep by means of
actography)

(MOVEMENT

in sleep, registration)

PLATONOV, I.L.; CHAPEK, A.V.

Activities of section of Aviation Medicine of the Moscow Society of
Physiologists, Biochemists and Pharmacologists. Fiziol. zhur. 42
no.8:728 Ag '56. (MIRA 9:11)
(AVIATION MEDICINE)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0

CHAPEK, A.V., kandidat meditsinskikh nauk (Moskva)

Prevention and treatment of air sickness. Pol'd. i akush.
22 no.3:28-33 Mr '57 (MLRA 10:5)
(AVIATION MEDICINE)

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0"

CHAPEK, A., kand.med.nauk

Age does not hinder flying. Grazhd.av. 18 no.11:30 N '61.
(MIRA 15:2)
(FLIGHT--PHYSIOLOGICAL ASPECTS)

ACCESSION NR: AT4042669

S/0000/63/000/000/0134/0135

AUTHOR: Gilinskiy, V. Ya.; Chapek, A. V.; Kozlova, A. G.; Kulikova, N. M.; Loshak, A. Ya.

TITLE: The effects of small concentrations of carbon monoxide on the human organism in airtight cabins of passenger aircraft

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy konferentsii. Moscow, 1963, 134-135

TOPIC TAGS: carbon monoxide effect, pressure chamber, man, higher nervous activity, passenger aircraft

ABSTRACT: In order to study the effects of small concentrations of carbon monoxide, experiments were performed on 82 persons in pressure chambers and 185 persons in aircraft. Experiments have shown that after 3 hours, the presence of carbon monoxide in concentrations of 0.01 mg/l and higher causes certain negative shifts in the functional condition of a number of organs and systems. In the area of higher nervous activity, it was found that the presence of carbon monoxide resulted

Card 1/2

ACCESSION NR: AT4042669

in a lowering of the ability to differentiate, a decrease in memory, a shortening of the attention span, and an increase in the time for carrying out assigned tasks. In the area of visual and vestibular analyzers, it caused an increase in the latent period, a diminution in the retention of the afterimage, and a diminution in the time of counter rotation illusion. In the metabolic processes, it caused changes in body temperature. In the cardiovascular system, it caused changes in arterial pressure, changes in the functions of the cardiac muscle, etc. It caused a weakening of the muscles. It caused formation of carboxyhemoglobin in the blood and other changes in the composition of blood elements. On the basis of these data, it is suggested that 0.01 mg/l of carbon monoxide be established as the maximum allowable in the cabins of passenger aircraft.

ASSOCIATION: none

SUBMITTED: 27Sep63

ENCL: 00

SUB CODE: LS

NO REF Sov: 000

OTHER: 000

Card 2/2

CHAPEK, A.V., kand. med. nauk

Problems of medical care for passengers on board of modern
gas turbine airplanes. Sov. med. 28 no.6:137-139 Je '65.
(MIRA 18:8)

1. Otdel aviatsionnoy meditsiny (nachal'nik - kand. med. nauk
L.S. Isaakyan) Gosudarstvennogo nauchno-issledovatel'skogo
instituta grazhdanskoy aviatsii SSSR, Moskva.

I. 08338-67 LWT(1) SCTB DD/GD

ACC NR: AT6036682

SOURCE CODE: UR/0000/66/000/000/0382/0384

AUTHOR: Chapek, A. V.; Mirzoyev, B. N.; Somonov, V. N.

30

ORG: none

TITLE: Effect of acoustic shock waves caused by modern aircraft on human organism
[Paper presented at the Conference on Problems of Space Medicine held in Moscow from
24-27 May 1966]

SOURCE CODE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy
kosmicheskoy meditsiny, (Problems of space medicine); materialy konferentsii,
Moscow, 1966, 382-384

TOPIC TAGS: sonic boom, electroencephalography, human physiology,
psychophysiology, acoustic biologic effect

ABSTRACT:

The advent of supersonic aircraft has made it necessary to study the effect of pulsed noise (sonic boom or acoustic shock) on the human organism. Experiments were conducted for this purpose with healthy subjects aged 22--52 at an observation point located under a flight path. The following physiological indices were recorded prior to, during, and after the acoustic shock: brain biopotentials (EEG), cardiovascular activity (EKG recorded

Card 1/3

L 08838-67

ACC NR: ATG036682

on a TEK-1 apparatus), and the quality of work. Auditory acuity was studied, together with the electrical sensitivity of the visual analyzer, the duration and latent period of the visual afterimage, and the corticosteroid level in the peripheral blood (all both before and after shocks). To supplement these data, a questionnaire was distributed to inhabitants of a city located under a flight path.

Acoustic shocks with intensities up to 8.4 kg/m^2 , produced by an aircraft cruising over the observation point, caused some brief physiological shifts in man: quickening of the pulse by 10--46 beats/min, and decrease in the amplitude of the alpha rhythm of an EEG. However, these shifts did not exceed physiological norms and returned to initial levels within 1--2 min.

No substantial changes were observed in the following indices after an acoustic shock of 3.4 kg/m^2 : heart biopotentials, auditory acuity, electrical sensitivity of the eye, duration of the visual afterimage and its latent period, and corticosteroid levels. The quality of work, judged by the ability to estimate microintervals of time, decreased insignificantly at the moment of acoustic shock and returned to initial level rapidly. Acoustic shocks with intensity levels up to 7.5 kg/m^2 did not produce any physiological shifts.

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ACC NR: AT6036682

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Sonic booms produced the following effects on people living under flight paths, according to data from the questionnaire: strong irritating effect -- 38%, medium effect -- 28%, and weak effect -- 6.8% of responses. In 27.2% of cases no irritating effect was reported. The following results were obtained with people subjected to the multiple effect of pulsed noise: strong irritating effect in 3.6% of cases, medium irritating effect in 29.3%, and weak effect in 20.8%. In 46.3% of the cases acoustic shocks did not cause any unfavorable effects. Apparently, many people adapt to the effect of pulsed noise, and do not experience the unpleasant effects of acoustic shock. [W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

[Signature]
Card 3/3

CZECHOSLOVAKIA/General and Systematic Zoology. Insects. P
Harmful Insects and Acarids. Forest Pests.

Abs Jour : Ref Zhur - Biol., No 3, 1959, No 11675

Author : Chapok M., Obertol R., Weiser J.

Inst : -

Title : Diseases, Parasites and Predators of the Fir Leaf-Roller in the Central Part of Slovakia.

Orig Pub : Losn. casop., 1958, 4, No 1, 46-70

Abstract : No abstract

Card : 1/1

CHAPIDZE, G.E. (Moskva)

Characteristics of regional circulation in hypertension. Klin.
med. 39 no.1:60-64 Ja '61. (MIRA 14:1)

1. Iz 2-y kafedry terapii (zav. - prof. B.Yr. Votchal) Mental'-
nogo instituta usovershenstvovaniya vrachey (dir. M.D. Kovrigina).
(HYPERTENSION) (PLETHYSMOGRAPHY)

CHAPIDZE G. E.

VOTCHAL, B. E. [Votchal], dr., prof.; CSAPIDZE, G. E. [Chapidze] aspirans

Peripheral vessels in essential hypertension. Orv. hetil. 102 no.16:
726-728 16 Ap '61.

1. Moszkvai Kozponti Orvosképző Intézet, II Belklinika.

(HYPERTENSION)

KONONYACHENKO, V.A., doktor med.nauk; CHAPIDZE, G.E. (Moskva)

Action of gangleron and hexonium on the regional blood circulation in hypertension. Klin.med. no.9:106-111 '62.

(MIRA 15:12)

1. Iz Instituta terapii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. A.L. Myasnikov) i 2-y kafedry terapii (zav. - prof. B.Ye. Votchal) TSentral'nogo instituta usovershenstvovaniya vrachey.

(GANGLERON) (HEXONIUM)

CHAPIK, A.

Studies on infusoria and rotifera in ground water and on the sandy bottom of
of Stalin Bay. p. 61
Vol. 17, 1952 TRUDOVE

SO: Monthly List of East European Accession, (EEAL), LC, VOL. 4, No. 9, Sept. 1955
Uncl.

CHAPIK, A.

Infusoria and fotifera in Stalin Lake. p. 67.
TRUDOVE. Vol. 17, 1952

SO: Monthly list of East European Accession, (EEAL), LC, Vol. 4, No. 9, Sept. 1955
Uncl.

CHAPIK, A.

Studies on cavities in rocks of the Black Sea Coastal region. p. 73.
TRUDOVE VOL. 17, 1952.

SO: Monthly list of East European Accession, (EEAL), LC, Vol. 4, No. 9, Sept. 1955
Uncl.

CHAPIKOVA, A.R.

Forms of phosphorus compounds in buds of perennial grasses.
A. R. Chapikova (C. R. Acad. Sci. U.R.S.S., 1948, 60, 1073 -1077).
Perennial-grass buds contain more total- and nucleo-
protein-P in the autumn than in the spring. Phosphatide-P of
2-year plants is higher, and of 3-year plants lower, in the autumn;
the reverse relations hold for acid-sol. org. P, whilst acid-sol. inorg. P
rises in the autumn for 2-year, but remains constant for 3-year
plants.

R. Tauszov.

CHAPIKOVSKIY, G.I.

Apparatus for the preparation of a flour suspension in the production
of starch. Sakh.prom.35 no.3:62-64 Mr '61. (MIRA 14:3)

1. Klimovskiy krahmal'nyy zavod.
(Flour) (Starch)

CHAPKA, A. M.

Chapka, A. M. -- "The Problem of Calculating Graduated Rods under Linear Shock." Min Higher Education USSR. Moscow Order of Labor Red Banner Inst of Steel imeni I. V. Stalin. Moscow, 1956. (Dissertation For the Degree of Candidate in Technical Sciences).

So: Knizhnaya Letopis', No. 11, 1956, pp 103-114

(CHAPKA, et al.)

AUTHORS Chapka, A.M., and Zaykov, M.A. 32-8-32/61

TITLE Automatic Measurement of the Power Input Necessary for Rolling by Means of a Wire-Wound Resistance Indicator. (Avtomlicheskiy zamer usilii prokatki s pomoshch'yu provolochnykh datchikov soprotivleniya).

PERIODICAL Zavodskaya Laboratorika, 1957, Vol. 23, Nr 8, pp. 964 - 965 (USSR.).

ABSTRACT In the "Kuznetsk Metallurgical Combine" a permanently working apparatus for measuring and recording the rolling power input in rolling machines was set up. The deformation of the supporting mount in the moment of rolling work is here used as primary impulse. For recording this deformation on the rolling machine mount two rails (40 x 4 mm) are attached so that they form a firm parallelogram (diagonal 1740 x 100 mm) in the framework of the machine. The direction of the longer diagonal of the parallelogram runs in the direction of the deformation of the supporting mounts. While the metal passes through the rolls an elongation of the supporting mounts takes place which causes the elongation of the long diagonal and the corresponding shortening of the short one. By the here attached special electrical device these shifts are automatically measured and recorded. The use of such a permanently working device with self-control permits the rational utilization of the machine, since it furnishes the necessary data concerning the exchangeable parts of the machine for a given case of stress. (3 illustrations and 1 table).

ASSOCIATION Siberian Metallurgical Institute im.S.Ordzhonikidze (Sibirskiy metallurgicheskiy institut)

C-2

TSYAPKO, Nikolay Fedorovich, inzh.; CHAPKA, Anatoliy Marianovich, kand.
tekhn.nauk; MUROK, G.A., prof., doktor tekhn.nauk, retsenzent;
GERONT'IEV, V.I., prof., doktor tekhn.nauk, retsenzent;
SEREBRYANYY, A.G., ovt.red.; OHRIMENKO, V.A., red.izd-va;
KOROVENKOVA, Z.A., tekhn.red.

[Hydraulic coal breaking in underground coal mining] Gidroot-
boika uglia na podzemnykh rabetakh. Moskva, Gos.nauchno-tekhn.
izd-vo lit-ry po gornom delu, 1960. 312 p. (MIRA 13:5)
(Hydraulic mining)

SOROCHKIN, Yu.N.; CHAPKA, A.M., kand.tekhn.nauk

Experimental investigation of the strength of the "Zaporozhets"
car body. Avt.prom. 28 no.1:8-11 Ja '62. (MIRA 15:2)

1. Avtozavod "Kommunar", Zaporozhskiy mashinostroitel'nyy
institut imeni V.Ya. Chubarya.
(Automobiles--Bodies)

"APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0

CHAPKEVICH, A. A.

(DECEASED)

1963/2

c¹ 1962

AGRICULTURAL MACHINERY

see ILC

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000308120016-0"

CHAPKEVICH, V.A., kandidat tekhnicheskikh nauk; OSIPYAN, A.V., kandidat tekhnicheskikh nauk, redaktor; KOZLOVSKIY.I.S., kandidat tekhnicheskikh nauk, redaktor; ZIL'BERBERG, Ya.G., inzhener, redaktor; BRILING, N.N., professor, doktor tekhnicheskikh nauk, redaktor; KALISH, G.G., professor, doktor tekhnicheskikh nauk, redaktor; PEVZNER, Ya.M., professor, doktor tekhnicheskikh nauk, redaktor; KHRUSHCHOV, M.M., doktor tekhnicheskikh nauk, professor, redaktor; RAMAYYA, I.S., doktor tekhnicheskikh nauk, redaktor; LIPGART,A.A., professor, redaktor; PRYADILOV, V.I., kandidat tekhnicheskikh nauk, redaktor; ROZANOV, V.G., kandidat tekhnicheskikh nauk;redaktor; CHISTOZVONOV, S.B., inzhener, redaktor; UVAROVA, A.F., tekhnicheskiy redaktor.

[Investigation of the operation of the IaAK engine] Issledovanie rabochego protsessa dvigatelya IaAK. Moskva, Gos.nauchno-tekhn. izd-vo mashino-stroit.lit-ry, 1956. 41 p. (Moscow. Gosudarstvennyi nauchno-issledovatel'skiy avtomobil'nyi i avtomotornyi institut. [Trudy], no.79) (MIRA 10:3)

1. Direktor Nauchno-issledovatel'skogo avtomobil'nogo instituta(for Osipyan).
2. Zamestitel direktora Nauchno-issledovatel'skogo avtomobil'nogo instituta po nauchnoy rabote (for Koslovskiy)
3. Chlen-korrespondent AN SSSR (for Briling).
(Automobiles--Engines)

CHAPKEVICH, V.A.

KHANIN, N.S.; kandidat tekhnicheskikh nauk; KALISH, G.G., doktor
tekhnicheskikh nauk; ANDRONOVA, T.B., kandidat tekhnicheskikh nauk;
KUKHAREV, M.N., kandidat tekhnicheskikh nauk; GERSHMAN, I.I.;
CHAPKEVICH, V.A., kandidat tekhnicheskikh nauk;
YERMOLAYEV, P.S.

Review of the book "Internal combustion engines," Edited by
A.S. Orlin. N.S. Khanin and others. Avt. i trakt. prom. no.7:
45-46 J1 '56. (MLRA 9:10)

1. Nauchno-issledovatel'skiy avtomotornyy institut.
(Gas and oil engines) (Orlin, A.S.)

SOV/113-59-2-20/20

AUTHOR: Kalachev, L.D., Lapidus, V.I., Adamovich, A.V., Chapkevich,
V.A., Dymshits, I.I., Candidates of Technical Sciences,
Korchemnyy, L.V., and Konev, B.F.

TITLE: Critique and Bibliography (Kritika i bibliografiya)

PERIODICAL: Avtomobil'naya promyshlennost', 1959, Nr 2, pp 47-48 (USSR)

ABSTRACT: This is a critical review of the "Raschët i konstruirov-
aniye mashin, sbor." (Calculation and Design of Machines,
Symposium), published by the Chelyabinskiy politekhnicheskiy
institut (Chelyabinsk Politechnical Institute), Volume 10,
Mashgiz, 1957.

ASSOCIATION: NAMI

Card 1/1

USCCOMM-DC-61005

KISELEV, B.A., inzh.; EIPGART, A.A., otv.red.; PASHIN, M.A., red.; BORISOV, S.G., red.; BRISKIN, M.I., red.; PRYZGOV, N.N., red.; DYBOV, O.V., red.; ZIL'BERBERG, Ya.G., red.; LOZAR', A.S., red.; LUNEV, I.S., red.; NAGAYEV, P.V., red.; PEVZNER, Ya.M., red.; PRYADILOV, V.I., red.; RAMAYYA, K.S., red.; SAMOL', G.I., red.; SEDOVA, Ye.V., red.; TAMRUCHI, O.V., red.; CHAPKEVICH, V.A., red.; CHISTOZVONOV, S.B., red.; SHKOL'NIKOV, E.M., red.; SMIRNOVA, G.V., tekhn.red.

[Investigation of the operation and gas-exchange of a loop-scavenged two-cycle motor-vehicle diesel engine] Issledovanie rabochego protsessa i gasoobmena dyukhtaktnogo avtomobilnogo dizelia s petlevoi proshivkoj. Moskva, Mashgiz, 1961. 493 p. (Moscow. Gosudarstvennyi nauchno-issledovatel'skii avtomobil'nyi i avtomotornyi institut. Trudy, no.30). (MIRA 16:8)
(Motor vehicles—Engines)

CHAPKEVICH, Vasiliy Semenovich; KARPILENKO, S.T., kand. ist. nauk,
nauchnyy red.; GRIEAKIN, D.V., red.izd-va; GURDZHIYEVA, A.M.,
tekhn. red.

[Communism begins today] Kommunizm nachinaetsia segodnia. Leningrad, Ob-vo po raspr. polit. i nauchn. znanii RSFSR, 1962.
76 p.

(Russia—Economic policy)

Chapkis, D-T.

CHAPKIS, D., inzh.

Kerosene cutting torch with a straight head. Mor.flot 17 no.10:26
O '57. (MIRA 10:12)

1. Kiliyskiy sudoremontnyy zavod.
(Cutting tools)

CHAPKIS, David Toyvovich; MELEYEV, A.S., red.; LAVRENOVA, N.B., tekhn. red.;

[Using and repairing kerosene cutters] Eksploatatsiya i remont
kerosinorezov. Moskva, Izd-vo "Morskoi transport," 1958. 91 p.
(MIRA 11:11)

(Gas welding and cutting)

CHAPKIS, D., insb.

Using blowtorches for cleaning hulls. Mor. flot 19 no.2:36-37
F '59. (MIRA 12:3)

1.Kiliyevskiy sudoremontnyy zavod.
(Blowtorches) (Hulls (Naval architecture)--Cleaning))

CHAPKIS, D.T.

Rated thickness of worn plating on ship hulls. Inform. sbor. TSNIIMF
no.75 Tekh. ekspl. mor. flota no.14:86-94 '62. (MIRA 16:3)
(Hulls (Naval architecture)) (Plates, Iron and steel)

CHAPKIS, D.T., inzh.

Determining the mean thickness of worn ship hull plates by
means of statistical methods. Sudostroenie 28 no.7:49-51
Jl '62. (MIRA 15:8)
(Hulls (Naval architecture)) (Thickness measurement)

CHAPKIS, D.T., inzh.

Effect of irregular wear on the static strength of ship hull
plating. Sudostroenie 29 no.5:14 My '63. (MIRA 16:9)
(Hulls (Naval architecture))

CHAPKIS, D.T.

Lowering of the yield limit of ST.4S shipbuilding steel during
the testing of wide strip specimens. Trudy TSNIIMF 57:89-92
'64. (MIRA 18:2)

CHAPKOVSKIY, V.L.

Central dispatching and automatic operation of regional water supply systems. Vod.i san.tekh. no.6:5-8 S'55. (MLRA 9:1)
(Water supply engineering) (Automatic control)

CHAPKOVSKIY, V.L.

Present state and problems in the automation of water-supply
and sewerage systems and structures. Vod. i san. tekhn.
no.10:3-5 0 '61. (MIRA 14:11)

(Water-supply engineering)
(Sewerage)
(Automatic control)

CHAPKOVSKIY, Veniamin Lvovich: SMIRNOV, D.N., kand. tekhn. nauk,
retsenzent

[Automatic control in water supply and sewer systems] Avto-
matika v sistemakh vodosnabzheniya i kanalizatsii. Moskva,
Stroizdat, 1965. 159 p. (MIRA 18:8)

L 39979-65 EPR/EWP(k)/EWA(c)/EWT(m)/EWP(b)/EWA(d)/EWP(t) Pf-4/Ps-4 IJP(c)
JD/HW/GS S/0000/64/000/000/0249/0256 37
ACCESSION NR: AT5006715 36
B+1

AUTHOR: Severdenko, V. P. (Meritorious scientist of science and technology BSSR,
Academician AN BSSR, Doctor of tech. sciences, Prof.); Tochitakiy, E.I.; Chaplanov, A.M.
TITLE: Epitaxial growth of metallic films on halides

SOURCE: AN BSSR. Fiziko-tehnicheskiy institut. Plastichnost' i obrabotka
metallov davleniyem (Plasticity and metalworking by pressure). Minsk, Izd-vo
Nauka i tekhnika, 1964, 249-256

TOPIC TAGS: epitaxial growth, metal film, alkali halide, twinning, lattice para-
meter, trilling, epitaxy temperature, sprayed iron, sprayed aluminum

ABSTRACT: After discussing various theories that have been put forth concerning
epitaxy, the authors give their opinions on the mechanism of condensation and
oriented growth of vacuum-sprayed films. The discussion is simplified by examining
the process of the formation and growth of the crystal seed on an ideal model
consisting of one atomic row of an ionic crystal with lattice parameter a , on
which a metal having a smaller lattice parameter is deposited. The deposited atom
is polarized near the surface and, having given up part of the energy to the lat-
tice, enters a potential well, under which is a halogen ion. As a result of migra-

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ACCESSION NR: AT5006715

O

tion there are two deposited atoms in adjacent minima. They interact and, having lost part of their energy, form a twin. The interaction of the atoms of the twins and with the ions of the base layer results in the latter stretching the twin so that its atoms are under the halogen ions. In turn, the twin will compress the ions of the base layer, trying to bring them close to the lattice parameter of the deposited metal. As a result, the space between the atoms of twin b_1 will be greater than b , and the ions of the halogen will draw nearer so that the distance between them (a_1) will be less than a . As a result of this interaction the atoms of the twin will complete an oscillatory movement, not on the bottom of the potential well but on its walls. Two more atoms of the deposited metal enter into potential wells adjacent to the twin and interact with it. In order that they can be united with the twin the next halogen ion must be displaced, and by a greater magnitude than the first, since the atoms of the twin are on the wall of the next potential well farther from them. All this leads to the atoms joined to the crystal seed being further and further removed from the surface of the base layer by ascending up the wall of the potential well and the halogen ions being displaced a smaller distance. It was found that almost all metals when, sprayed on a single-crystal base layer of alkali halides heated to room temperature, form fine-

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L 39979-65

ACCESSION NR: AT5006715

grained polycrystalline films. Heating of the base layer to 300-400°C resulted in most of the grains of the sprayed film being oriented along the base layer, i.e., the plane of orientation coincided with its surface and the direction coincided with one of its crystallographic directions. At certain temperatures for various metals on a heated base layer the oriented single-crystal film of deposited metal grows completely. This temperature is called the temperature of epitaxy. This picture was observed when Fe and Al were sprayed on single-crystal base layers of NaCl, KCl, and KBr. It was established that the temperature of epitaxy for Fe sprayed on NaCl was 480°C, on KCl 460°C, and on KBr 440°C; for Al, it was 450°C on NaCl and 430°C on KCl. Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 16May64

ENCL: 00

SUB CODE: IC ,SS

NO REF Sov: 002

OTHER: 006

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SOURCE CODE: UR/0137/66/000/003/1035/1035

AUTHOR: Severdenko, V. P.; Gurskiy, L. I.; Tochitskiy, E. I.; Chaplanov, A. M.TITLE: Distribution of dislocation density during plastic deformation of metals

SOURCE: Ref. zh. Metallurgiya, Abs. 31237

REF SOURCE: Sb. Metallovedeniye i term. obrabotka met. Minsk, Nauka i tekhnika, 1965, 49-57

TOPIC TAGS: crystal lattice dislocation, plastic deformation, iron property

ABSTRACT: The electron microscope and x-ray analysis were used for determining dislocation density in iron by transillumination after cold plastic deformation. The deformation conditions used were single-pass rolling and multiple-pass rolling with unit reductions of 1-1.5% to the same total degree of deformation as with the single-pass method. Dislocation density was determined in surface layers of a strip with an original thickness of 12 mm after deformation by 9.7, 13.4, 20.0, 32.4 and 45.3%. A URS-501 diffractometer was used for x-ray analysis. Both the dimensions of coherent scattering regions and microdistortions of the crystal lattice were used in determining dislocation density. It is found that the density of dislocations in the case of multiple-pass deformation is considerably lower and the distribution of the dislocations with respect to the cross section of the strip is more uniform than for the case

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of single-pass rolling. The results confirm the possibility of using the electron microscope and x-ray analysis for a quantitative determination of dislocation density. V. Ivanova. [Translation of abstract] O

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SUBJECT USSR/MATHEMATICS/Differential equations CARD 1/2 PG -163
AUTHOR CHAPLANOV M.G.
TITLE Linear differential equations of infinite order with analytic
coefficients.
PERIODICAL Doklady Akad. Nauk 105, 1162-1165 (1955)
reviewed 7/1956

Infinite matrices which transform a Hilbert space into itself possess either a unique inverse matrix or infinitely many left- and no right-inverse matrix, or infinitely many right- and no left-inverse matrix or no inverse matrices. This well known property of infinite matrices is extended to matrices which transform arbitrary coordinate spaces into itself, which were introduced by Köthe and Toeplitz (J.reine und angew. Math. 171, 193 (1934)). Thereby a complete classification of such matrices is obtained. Four principal types and eight subtypes are distinguished. There exists a unique relation between the type of a matrix and that of its transpose that can be utilized in many cases where the type of the given matrix is unknown but the type of the transpose is fixed. These conditions are used for the solution of the differential equation of infinite order

$$a_0(x)y + a_1(x)y' + \dots = f(x).$$

$a_i(x)$ and $f(x)$ are assumed to be analytic functions in the coordinate origin.

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Developing the functions $a_i(x)$ and $f(x)$ in terms of power series, then for the determination of the coefficients of the latter one obtains a certain linear algebraic system of equations. There exists an isomorphism between the matrices and the solutions of the algebraic system and between the differential equations and their solutions. The above mentioned classification of the matrices gives a classification of the linear differential equations of infinite order.

INSTITUTION: Public University Rostov/ Don.